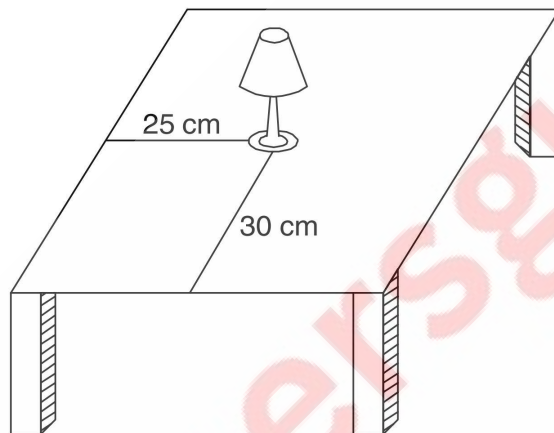# Exerise 3.1

1. *How will you describe the position of a table lamp on your study table to another person?*

Sol. Consider the lamp as a point and table as a plane. Choose any two perpendicular edges of the table. Measure the distance of the lamp from the longer edge, suppose it is 25 cm. Again, measure the distance of the lamp from the shorter edge, and suppose it is 30 cm. We can write the position of the lamp as (30, 25) or (25, 30), depending on the order of axes we fix.

Note: Student may suppose different distances from edges.

2. **Street Plan:** *A city has two main roads which cross each other at the centre of the city. These two roads are along the North-South direction and East-West direction. All the other streets of the city run parallel to these roads and are 200 m apart. There are about 5 streets in each*

crossing, then we will call this cross-street (2, 5). Using this convention, find:

(i) how many cross-streets can be referred to as (4, 3)?

(ii) how many cross-streets can be referred to as (3, 7)?

Sol. The model of Street plan is shown in figure given below.
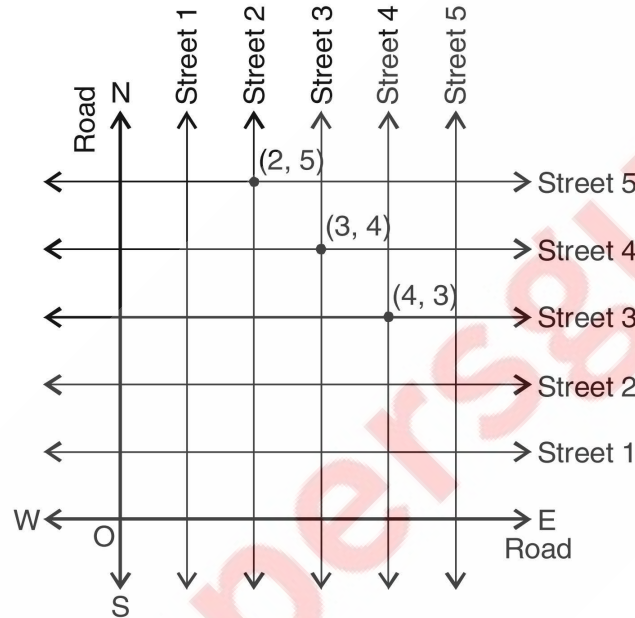
Let us take East-West as *x*-axis and North-South as *y*-axis of coordinates.

Both the cross-streets (4, 3) and (3, 4), are marked in the figure above. They are *uniquely* found because of the two reference lines we have used for locating them.